FYI
Fluor Your Information

In This Issue

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The K Reactor and Basin Building stand in sharp contrast with the blue sky on a sunny day in 2006.

Sludge being collected in K West Basin

The system for retrieving sludge from the K West Basin successfully passed its Readiness Assessment and began operating late in 2006. The system is expected to operate into summer 2007, gathering the estimated five cubic meters (6.5 cubic yards) of sludge in the K West Basin into underwater containers. The system will operate in parallel with other work, including receipt of sludge transfers from the K East Basin.

"We used many lessons learned from sludge containerization in the K East Basin," says Rhonda Nissen, K West Basin sludge-retrieval project manager. "We incorporated some of their [K East Basin personnel] ideas directly into our process, while others had to be modified or adjusted to meet the different conditions in the K West Basin."

The foremost lesson that came from the K East Basin, she says, "…was the decision to remove debris from the basin early, so that sludge vacuuming wasn't encumbered." K Basins Closure (KBC) Project workers have removed about 150 tons of debris and fuel racks from the K West Basin, including canister cleaning equipment. In the K East Basin, workers removed about another 150 tons during and between collecting sludge.

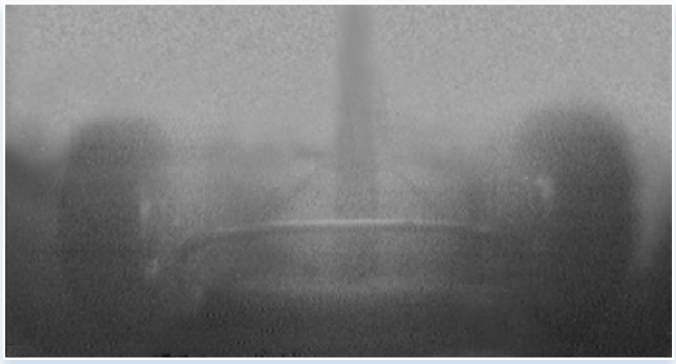
In addition, project workers have built a station for removing debris in the west bay of the K West Basin, similar to the station that proved so effective in the K East Basin. They still must remove about 75

K West ... Continued on page 2

K West... *(Continued from page 1)*

percent of the fuel-retrieval system that operated in the K West Basin from 2000-2004. They'll remove the primary and the west process tables, the decapper, the well-known "Konan" manipulator arms, the empty basket table, and the station for manipulating stuck fuel. Crews plan to leave the east process table and the primary cleaning machine in place to process legacy fuel in the future. They are also removing about 80 fuel racks that remain today in the K West Basin.

Importantly, K West Basin personnel will use many of the creative "end effectors" developed during K East Basin pumping (see Oct. 30, 2006 *FYI Link*). K East workers devised different end effectors or suction "heads" on the sludge-pumping equipment for getting into different areas under many different conditions including corners, flat surfaces, thick sludge, and flighty sludge.



Work at the K Basins is incorporating knowledge gained during K East Basin pumping operations, technical lessons in sludge-pumping velocities, flocculent-injection issues, and solutions to many other challenges. Flocculent is added to the slurry as pumping occurs, to combine the flighty sludge into heavier "clumps" that will settle into sludge containers and help to keep the water in the basin clearer.

A key difference between the K East and K West Basin methods, says Niessen, is that the sludge-collection containers or tanks at the bottom of the K West Basin have lexan™ (synthetic, composite resin) covers that allow visibility into the tanks. (Lexan is a registered trademark of the General Electric Company of Schenectady, N.Y.) They also have injection ports where water is pushed in through a manifold.

Six sludge container tanks now sit in the K West Basin, but only one is designated to hold K West sludge. The other five tanks are there to receive transfers of the much larger volumes of sludge collected in the K East Basin. K East Basin personnel began collecting "final pass" sludge in that basin in mid-January.

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